
 <p>T&amp;R Test (Holdings) Ltd. Company</p>	<p>Live Line Indicator                  Model: LLI</p>
<p>Edgcumbe</p>	

## Introduction

The High Voltage DC Live Line Indicator (LLI) is a battery-operated electronic unit that has been specifically designed to test DC systems - with relevance to Mass Transit Railway (Metro) & Tram based models. Although usually applied to overhead catenaries they can also be used on "third rail" installations. Proving that the system is de-energised – and can thus be safely earthed – is important to both maintenance staff and system security.

Three versions are available to cover the most common system voltages of 750V, 1500V and 3000V DC.




	<p>Live Line Indicator Kit                  Each complete kit comprises:</p> <ul style="list-style-type: none"> <li>• DC Live Line Indicator with earth lead &amp; clamp</li> <li>• Bowthorpe Rod Adaptor incorporated into indicator case moulding</li> <li>• Universal Star-wheel Adaptor</li> <li>• Hook, Y and straight electrode</li> <li>• Polymer Cleaning Kit</li> <li>• Instruction manual</li> <li>• Carry Satchel</li> </ul>
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## Operation & Features

The DC LLI gives both visual (high intensity flashing red LED's) and audible (70dB) alarm should a conductor under test indicate as live. Each version has a threshold setting of approximately 33% of system voltage, above which the line is deemed to be energised.

The unit is first armed with the test button which will cause the alarms to activate and upon releasing the button the red LED's will be replaced by green ones and the audible alarm will stop. The green condition will remain active for about 5 minutes during which time the unit can be applied to the line under test and if the threshold is exceeded the warning alarms will again be activated. Pressing the test button also performs a battery check.

A universal "star wheel" adaptor is also available to connect to other operating poles and alternative clamps are available to suit various earthing systems, e.g., buried rail.

High Voltage Instruments Ltd.	LLI – Live Line Indicator
 <p data-bbox="399 421 571 452"><i>LLI Operation</i></p>	 <p data-bbox="1098 246 1343 331"><i>Special LLI with handles for Rail Networks Operation</i></p>
 <p data-bbox="370 824 600 855"><i>Live Line Indicator</i></p>	<p data-bbox="833 504 1018 526"><b>Live Line Indicator</b></p> <p data-bbox="833 528 1391 936"> <b>Voltage Ranges</b> 750V DC 1500V DC 3000V DCStd  <b>Thresholds</b> 250V DC 500V DC 1000V DC            (Thresholds can be adjusted for particular requirements)  <b>Resistor Chain</b> 1.5MΩ 3MΩ 6 MΩ  <b>Operating time</b> 5 minutes nominal  <b>Visual indication</b> LED's  <b>Status – Alarm</b> Red Flash @ 2Hz  <b>Status - Safe</b> Green Flash @ 2Hz  <b>Audible indication</b> Buzzer, 3.1kHz tone modulated @ 2Hz, 70dBA @ 1.5 Metres  <b>Measuring Current</b> 0.50 mA nominal @ rated Voltage  <b>Response Time</b> 1 second maximum  <b>Battery life</b> 250 Operations minimum         </p>